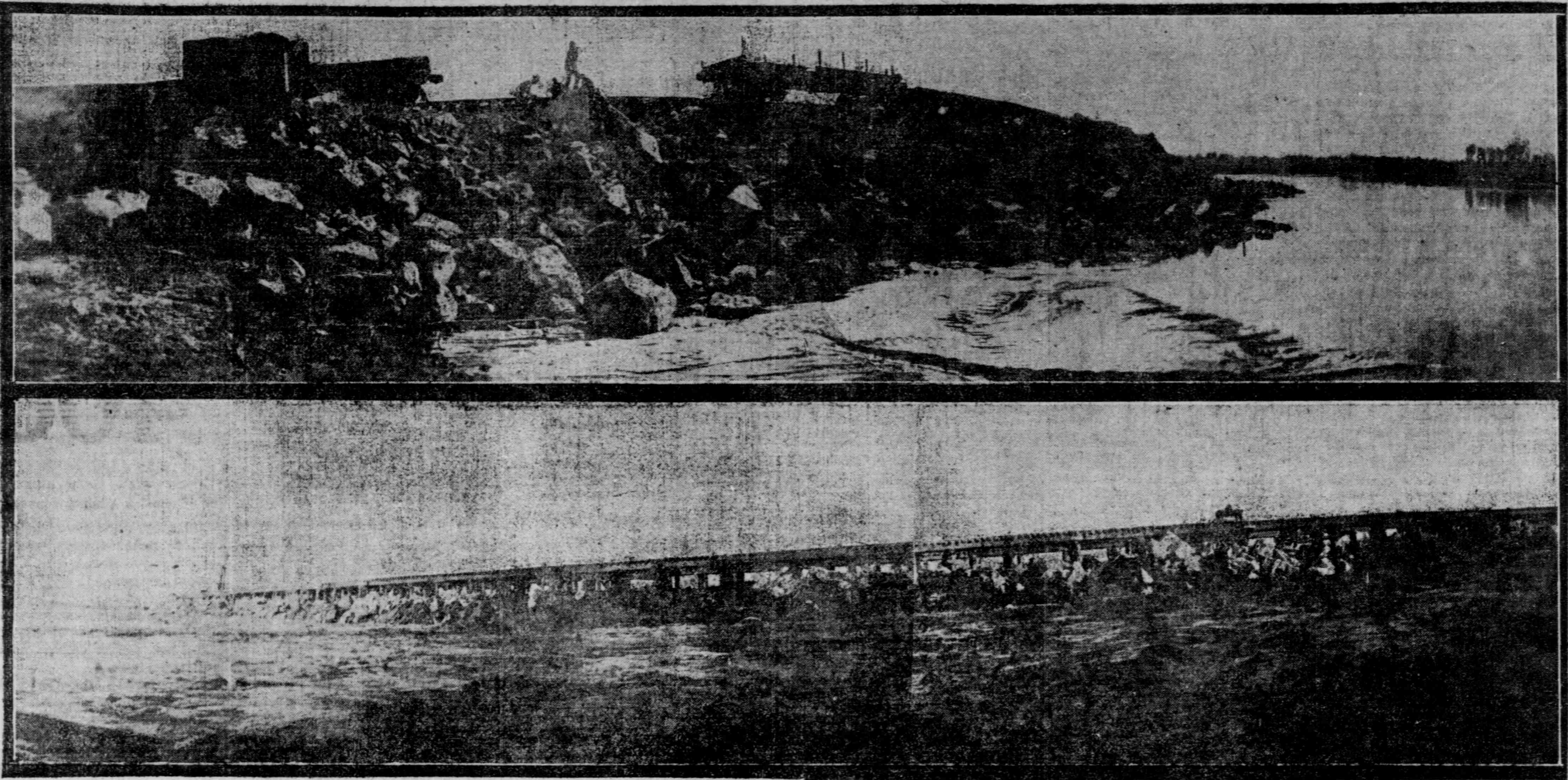


## HOW THE DUEL BETWEEN ENGINEERS AND THE COLORADO RIVER IS BEING FOUGHT

Rock on the face of the dam closing break in bank of the Colorado river.



Rock dam completed across break in bank of Colorado river.

"I was asked by the interstate commerce commission what I regarded as the greatest achievement of my railroad experience. My reply was that I considered the closing of the break in the Colorado river on the afternoon of Feb. 11 as the most remarkable achievement of recent history. In the handling of rock and stone our engineers made a record which is likely to stand for many years to come."—Statement by E. H. Harriman in Washington, D. C., on March 6.

When President Roosevelt demanded that the Southern Pacific company take steps to save the Imperial valley of California by stopping the break in the Colorado river, the prospect was gloomy. For years a duel had waged between nature and science and, so far, nature had won!

Today it is different. The break has been closed, closed within a period which has astonished the engineering world. The feat was thus described by Mr. Harriman:

"The time actually consumed in making the closure, dating from the dumping of the first rock, was fifteen days and two hours, during which interval 77,000 cubic yards of material, 95 per cent of which was rock, the balance gravel and clay, were handled. The difficulties which confronted the engineers will be better appreciated when it is recalled that the Colorado river, with a flow of 22,000 seconds-feet, was rushing madly through a break 1,100 feet long in soft earth banks. In mid-channel the depth of the water was thirty-four feet."

"But not only has the break been closed; the Southern Pacific engineers are determined that such a break shall not occur again. Additional material is being added today at the rate of 5,000 cubic feet each twenty-four hours. When completed the dam will contain 140,000 cubic yards of material, 30,000 yards of which will be rock and the balance gravel and clay."

**What Was Done in Two Weeks.**  
The maximum amount of water contained during the construction of the dam approximated 40,000 seconds-feet. In a period of a little more than two weeks a structure of rock, gravel and clay was built across the channel. The top of the dam is now four feet

above the level of the water. Its vertical distance from the top of the base is sixty feet. The dam will be raised five or six feet higher, in order to be safely above highest known water, and it is to be padded on the upstream side with clay until it shall become entirely impervious.

A great railroad corporation, with abundant rolling stock, alone could have achieved this feat. The entire equipment of the Southern Pacific was at the command of the engineers during the period of the work. At times even the locomotives on passenger trains were diverted to haul rock to the scene of the accident, and quarries hundreds of miles distant contributed materials to close the break.

Temporarily, at least, the Colorado has been conquered, but like the Mississippi in its delta region, it will be watching always. The Colorado is one of the shiftest, slyest and most treacherous rivers that ever ran.

The original scheme to reclaim the Imperial valley represented a design upon one of the richest sections of soil in the world—a region with which the valley of the Nile can alone be compared. No wonder then that in the effort to protect this region for future generations, the president of the United States has thought enough of it to send to congress a special message on the subject.

This valley will some day be the home of above 100,000 persons on hundreds of thousands of acres of truly garden farm lands if intelligent methods are employed. With a population of something like 10,000, property there is estimated to be worth in the neighborhood of \$5,000,000 today, and some day it is thought it will be worth seven times more at least. There were nests of little farm houses to be saved, tiny hamlets or settlements, small villages and larger towns clean up from the Mexican border and the Imperial valley above the town of Yuma and the government works at Laguna Dam. There were hundreds of miles of railroad to be saved, main line and branch lines, with their bridges, trestles, sidings and stations; there are salt works and other industries—surely a prize in itself worth the fighting for.

**The Salton Sink.**  
It was not so many years ago that the Salton district with the Imperial valley so-called was regarded as very much as Dead Sea fruit. The country was, in fact, a dried and dead sea. The Salton sink was described by scientists as "crystalline chloride of sodium," which is mostly salt, and the Imperial valley was the undisputed home of the horned and the diamond-back rattlesnake.

Some curious persons, geologists or others, investigating all this dry-as-dust land, saw that the valleys were really deposits of silt, left there ages before when there was a river flowing through, capable of the richest harvests if only water could be obtained for it. Rain was out of the question, and they suddenly realized that right at hand was the supply, all they wanted and more.

Nature had kindly arranged the New river, branch of the Colorado river, so that it could be made to transform the entire district without any trouble worth the mentioning. It had deposited the silt over it all, and the very act had raised its bed higher and higher each succeeding century until it was above the level of the land about it. All that was needed, therefore, was to tap the river intelligently, locate the canals and the things would be done.

The first tap was made in 1891 and the result was as expected. That part of the country affected began to blossom. Farmers began to come. Two years later a company was organized to take charge of the project.

Without taking thought of the morrow, they put in flimsy dams, strung a few wires and began to dig canals over the surface and sold water rights to settlers.

In the spring of 1904 the demand for irrigation was so great that another tap was made just south of the first one. The second one had scarcely been completed when both taps were filled up by silt washed in by the river.

To relieve the situation, in July, 1904, a third tap was made farther down the river, about four miles inside of the Mexican border. The location was chosen because it would give a greater drop to the canal and it was believed that the increased velocity of flow would keep the channel clear.

This tap caused the trouble. They

had simply opened a hole in alluvial soil forming the bank of the river.

Floods in the fall of 1904 caused the mouth of this third opening to wash considerably, and at each succeeding flood the conditions became more serious. The channel to the irrigation canals kept growing larger until in June, 1905, almost the entire discharge of the river flowed into the Salton sink, where a lake was formed which had an area of about 400 square miles.

Slowly it began to back up and flow back towards the Imperial valley. Farmers were compelled to leave, farms were inundated, miles and miles of railroad track and development went under water. The country became a wilderness of water.

Heroic efforts were made to stop the flood. The railroad's equipment and facilities were used and considerable progress made, but the fall floods washed out part of the work, only to have it rebuilt.

On Nov. 4, 1906, the break, which had been 1,500 feet wide, was closed, and on Nov. 115 all leakage of water through the dam had been stopped. It seemed as if the battle had been won, but another flood followed, and on Dec. 8 water rushed its way under the levees south of the dam. By noon on the following day nearly the entire Colorado river was emptying into the Salton sink. The president of the United States took a hand. He and Mr. Harriman exchanged numerous telegrams in a discussion as to the best course to be pursued. It was a rather delicate task for the government to undertake because an international question was involved. While the damage was being done in the United States, the break was in Mexico. The unshot of it was that the Southern Pacific was pledged to do the work.

The question as to what sum shall be paid to the railroad will be settled in the future," said the president in his message of January, and with that understanding the work is being done.

The railroad took hold of things at once. It seemed to the engineers as if the entire river bank was rotten. The entire bank of the river would have to be leveled and strengthened. They built a railroad and called for more engineers and more workmen. They organized a corps of levee builders, of men to build drain and muck ditches, and, above all, they perfected the flying squadron of break closers. Most important were these break closers, as has been pointed out—high-pressure, fully equipped fighting men, ready for all emergencies.

They went at the breaks with feverish haste, and there was neither night nor day for them, just twenty-four-hour periods. They studied the situation until they had every trick of the old river, every whim and every artifice at their finger's end. The bottom of every break was soft, as Mr. Harriman has said, soft and fine.

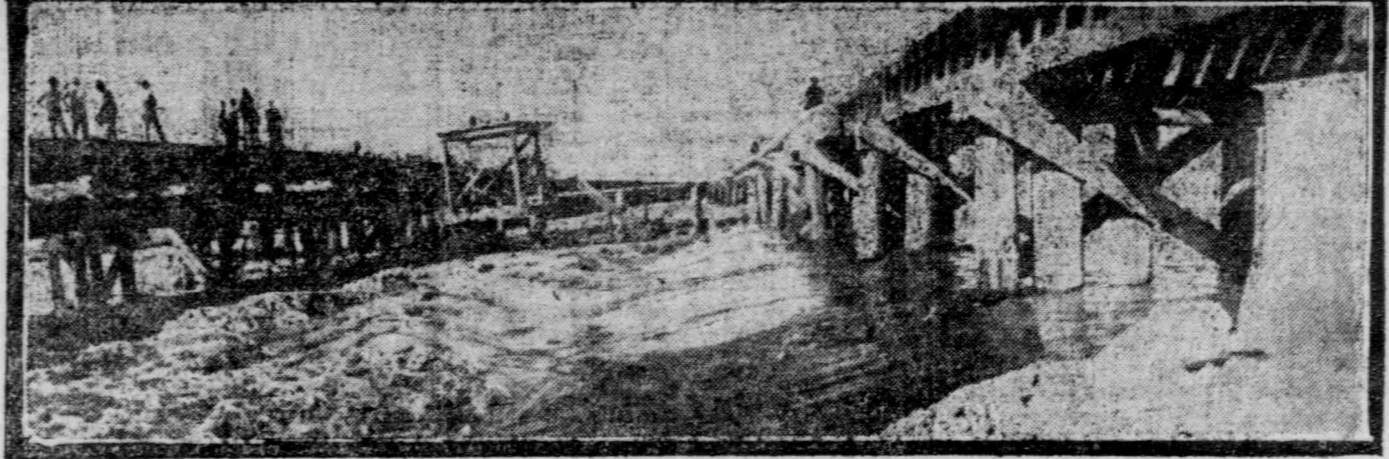
**How the Work Was Done.**  
Epes Randolph, in charge of the work, outlined a system of brush mattress work as the base for all his dams, and into this he threw his rock fill. First they would run a railroad trestling across a break, then they would put down their mattress, after which trainload after trainload of heavy stone would come along and splash into the water.

Upon the big breaks they used two trestles, just as in that break of Jan. 20. The second track would go against the rush of water in the form of a crescent, and this would form first an outlying bulwark of stone, after which they would fill in the intervening space. There isn't much chance for any river when they begin to fight it with fortifications like that.

As rapidly as the closure work has gone on, the other phase of protection has not been neglected. Every day and every hour sees the wall of levee all along the entire course rising higher and firmer. Every day sees confidence returning more and more to the farmers and artisans of the peaceful valleys.

Altogether it has been one of the sturdiest duels ever fought between American brains, push, energy and capture of Nature. Nature has been fighting this time and has fought with all the resources she possesses. She will lose, of course; as a matter of fact, she has lost; but the price treaty has not been signed, nor will it be signed until she is bound, gagged and lying prone.

Garfield Excursion Sunday, 50c.



Waters of the Colorado river rushing beneath trestles from which rock was dumped to form the dam.

## INVESTIGATION OF IMMIGRATION

National Commission to Meet in Washington Monday to Perfect Organization.

Washington, April 20.—An exhaustive investigation into all phases of immigration as it affects the United States is about to be begun by a national commission. The commission will meet here Monday to perfect its organization and to discuss plans for its work. It already had been decided tentatively that the members of the commission will visit Europe, either as a body, or if all the members cannot go, as a sub-committee for the study of immigration at close range.

The commission consists of nine members, appointed under the immigration act passed by congress last winter. Three of them, Senators Dillingham of Vermont, Lodge of Massachusetts and Lathrop of South Carolina, were named by Vice President Fairbanks. The other six, Representatives Lowell of New Jersey, Bennett of New York and Burnett of Alabama, by Speaker Cannon, and three, Charles P. Neill, commissioner of labor; Professor J. W. Jenks of Cornell and William R. Wheeler of Oakland, Cal., by President Roosevelt.

**European Visit Necessary.**  
While some work will be done by the commission in this country by way of beginning its inquiries, the general idea is to extend its labors to Europe. The most important ports of embarkation of emigrants will be visited. A tentative itinerary includes Great Britain, France, Germany, Austria-Hungary, Spain and Italy. It is expected that the trip will occupy three or four months.

The work of the commission will be only partly begun when it returns to America. Every possible source of information will be sought. Reports from all parts of the world will be placed at the disposal of the commission, and experts on immigration may be employed to collect data.

It is the purpose of the commission to inquire into the restrictions placed upon Chinese and Japanese immigration, but it is not probable that it will visit Asia.

**Will Report to Congress.**  
The commission will report its findings and recommendations to congress, to be used as a basis for legislation. It is regarded likely that out of the work will grow an international commission to consider the whole subject. The law creating the commission authorizes the president to issue a call for such a conference if he should deem such action desirable.

Old porch furniture as good as new. JAP-A-LAC will do it. Apply it yourself. See Bennett Glass & Paint Co., the Paint People, at 67 W. First South street.

Rose Sale at Vogelers Tuesday, 10 a. m.; 2-year-old roses transplanted, 15c each. Every one will bloom this year.

Garfield Excursion Sunday, 50c.

Our Grill Room at the Royal Cafe is open daily from 4 to 12 p. m.

## COLD TURKEY FOR FRANCE

Rumor That Leopold of Belgium Is About to Hand Over Congo Free State.

Paris, April 20.—A dispatch from Brussels says that the journey of King Leopold to Paris has been unexpectedly postponed from tomorrow until Monday.

This trip of the king of the Belgians has aroused much comment and speculation in political circles. The explanation that finds the most credence, but which is impossible of confirmation and is given with all reserve, is that Leopold will offer to cede the Congo independent state to France at his interview with President Fallieres. This interview was arranged while the king was on his way from Nice to Brussels.

France enjoys the right of pre-emption in the Congo under the treaty of Berlin, which treaty gave King Leopold power to dispose of the Congo state during his lifetime. It has always been his majesty's intention to turn over the Congo to Belgium, but exasperated by the opposition of the Belgian parliament to his views concerning the future government of the state, it is said that he now prefers to hand the country over to France. With that object in view the Belgian monarch, it is explained, is about to sound the French government.

In other quarters the opinion is entertained that the approaching interview with President Fallieres is nothing more than a threat against the Belgian parliament.

## SPANISH ELECTIONS.

Disorders Expected in Barcelona and Catalan Provinces.

Madrid, April 20.—The elections for members of the chamber of deputies, which commence tomorrow, promise to be prolific in disorder, particularly at Barcelona and in the four Catalan provinces, where the extreme right and the Republican party. The agitation has been increased by the formation by Senor Salmeron, the Republican leader, of an electoral league with the Catalan extreme home rulers and the Carlist and Ultraconservative, to defeat the revolutionary Republicans led by Deputy Leroux. The attack at Barcelona yesterday on Salmeron, in which Camba, a Catalan deputy, was mortally wounded, serves to increase the ill feeling.

The electoral struggle will be particularly fierce in Guadalupe, where the government seeks to break the long-standing influence of Count Romanones. In Madrid the Republicans have some Liberal support.

## FINAL INSTRUCTIONS.

Delegates to Hague Conference at State Department.

Washington, April 20.—In response to a call from Secretary Root, all of the American delegates to the second Hague peace conference, with the exception of Judge U. S. Rose of Arkansas, assembled in the executive mansion at the state department today and spent several hours in consultation with the secretary and Assistant Secretary Bacon relative to their share in the work of the approaching congress.

General Porter and Mr. Choate, who were appointed last June, already had received the department's instructions for the presentation of their case to the peace congress, but the increase of the delegation by the addition of Mr. Buchanan, General Davis and Admiral Sperry, and the enlargement of the prospective program, made necessary a repetition of the old instructions and considerable additions thereto.

Don't forget about Vogelers' Rose Sale Tuesday.

## MORE PAY DEMANDED.

Officers on New York Coastwise Steamers Threaten to Strike.

New York, April 20.—Unless a 10 per cent increase in pay for first, second and third class officers on coastwise steamers running out of New York is granted by the end of the month, the officers threaten to go on strike. This was the ultimatum sent out to representatives of eighteen steamship lines by Luther B. Dow, general agent of harbor No. 1, American Masters States and Pilots association.

The officers affected today sent their resignations to the lines by which they are employed, their contracts calling for ten days' notice. For several weeks the companies have been advertising for men and it is expected they will fight the strike.

The companies involved are the Porto Rico line, Mallory line, Clark line, Red D line, Panama line, Southern Pacific Oceanic Steamship company, Old Dominion line, Metropolitan line, Brunswick Steamship company, Ward line, A. H. Bull & Co., American-Hawaiian Steamship company, Atlantic Coast company, Standard Oil company, Luckenbach Steamship company, Guffey Oil company, the Merchants and Marine company of Baltimore.

## SEEKING INFORMATION.

Dr. Theodore Barth, German Leader, En Route to America.

Berlin, April 20.—Dr. Theodore Barth, leader of one of the radical parties in the German reichstag, and ex-editor of Die Nation, which recently discontinued publication, has started for New York by way of Genoa, from which port he will sail, April 24.

After a stop in New York and Washington, Dr. Barth will go west. Later he will visit Canada, returning via Boston.

It is Dr. Barth's intention to make a study of the most recent developments of American politics and social life, with special reference to the relations between the great capitalists and politics. He will study the immigration problem, inquiring how far the United States is succeeding in absorbing east European immigrants.

## MANEUVERS IN FINLAND.

Announcement a Prelude to Military Occupation.

St. Petersburg, April 20.—The officers of several infantry and artillery regiments of the guard have been notified that maneuvers in Finland may be substituted this year for the usual exercises in the summer camp at Kransoy-Selo. The news has caused considerable alarm among the Finns, who regard the step as a prelude to the military occupation of Finland.

The recent capture of cartridges from abroad which are supposed to have been destined for importation into Russia during Finland, and the capture of cartridges in the hands of the anti-Finnish advisers of the emperor. Two squadrons of torpedo boats have been formed to guard the Gulf of Bothnia.

## COLD SNAP IN IDAHO.

Some Damage to Fruit, but Not Enough to Be Serious.

(Special to The Herald.)  
Boise, Idaho, April 20.—A cold snap visited this section last night and caused some minor damage to fruit. The record at Boise was 32. In this immediate vicinity the temperature was no damage, but at points further west the temperature was much lower, dropping to 26 at Caldwell and Payette and 28 at Weiser. At those points peaches, apricots and cherries were badly damaged, but apples and pines, the two great commercial orchard products, were not damaged. It has been demonstrated several times that apples and pines will stand 26 in these valleys.

Garfield Excursion Sunday, 50c.

**Good Coffee**

Hewlett's Coffee

Such as Hewlett's Three Crown, not only supplies body, color and flavor, but it aids digestion of other food and helps you to get the full nourishment out of it without the aid of drugs.

Always ask your grocer for  
**Hewlett's Coffee**  
and you'll be sure it's fresh and good.

## EXPLOSION OF GENERATOR.

For Half an Hour Broadway, New York, Was in Darkness.

New York, April 20.—The explosion of an enormous electric generator tonight in the lighting plant of the New York Edison company at Thirty-eighth street and First avenue turned darkness on New York's most brilliantly lighted district.

The explosion was followed by fire, and although the firemen responded promptly, the water they threw into the building seemed only to spread the flames, which were feeding on the insulation of the great mass of wires inside the building.

For half an hour Broadway was almost in darkness. The footlights in half a dozen theatres were so dim that the actors were hardly distinguishable to the auditors, and in some places stampedes were narrowly averted. Scores of other moving picture theatres were put out of commission and in Bellevue hospital the attendants went busy for many minutes quelling a panic among the patients. Emergency generators were finally placed in operation by the lighting company.

## PERMANENT WRIT ASKED.

A. S. Bigelow Trying to Enjoin Calumet &amp; Hecla.

Boston, April 20.—Quincy A. Shaw, Alexander Agassiz, Francis La Follette and Frances W. Hunnewell, of Boston, directors of the Calumet & Hecla Mining company, were served with papers today in a new suit against the company begun in the United States circuit court at Grand Rapids, Mich., by A. S. Bigelow of Boston, president of the Mesabi Mining company. Bigelow asks for a permanent writ restraining the Calumet & Hecla company from voting the shares of other lake companies which it is said to control. He brings suit as a minority stockholder of the defendant corporation and seeks to prevent an alleged combination of lake copper properties. He asserts that the method adopted by the majority stockholders have been in violation of the United States and Michigan laws.

It is expected a hearing will be held in Grand Rapids in about ten days.

## COURT PICKS THE MAN.

Receiver Appointed for the Uncle Sam Oil Company.

Topeka, Kan., April 20.—Judge J. C. Pollock in the United States district court here today named J. C. O. Morse as receiver for the Uncle Sam Oil company under the bankruptcy petition filed recently at Fort Scott by certain stockholders. Mr. Morse, who is manager of the telephone company and a resident of Topeka, was a state railroad commissioner, gave a bond of \$50,000.

The court announced that the three stockholders who petitioned for the receiver furnish a bond of \$10,000 to cover any injury which might arise out of the appointment. The receiver was appointed under the bankruptcy law, which provides for the reorganization of a corporation to others constitutes an act of bankruptcy and a receiver may be appointed. J. P. Bransfield was appointed to take charge of the property and manage it to conserve the interests of the creditors.

## OKLAHOMA CONVENTION.

Adjournment Will Not Be Taken Until Monday.

Guthrie, Okla., April 20.—The constitutional convention did not adjourn sine die today, as was expected, but the delay in printing the new election ordinance. The document may be out of the printer by tomorrow. J. P. Bransfield, delegates probably will leave for their homes Monday.

It was stated tonight that the program of the convention upon assembling Monday morning would be to take a recess for several weeks instead of adjourning. Lack of concerted sentiment among the delegates forbids either an authoritative confirmation or denial of the report.

## SKIPPED WITH THE MONEY.

New York, April 20.—On a charge of grand larceny made by her stepfather, James T. Bransfield, of Chicago, Ella Bransfield, 26 years of age, was arrested tonight. The arrest, according to the police, followed a complaint by Mr. Bransfield that he gave his stepdaughter \$500 on April 9 to deposit in a bank and that she left Chicago with the money. J. P. Bransfield of Chicago was arrested as a suspicious person.

## BELIEVED TO BE DEAD.

Calro, Ill., April 20.—A coat and vest belonging to P. H. Strouwen, a general organizer for the American Federation of Labor, whose home is at Murphysboro, Ill., were found today on the Mississippi river bank below the Halliday hotel. Strouwen is well known in labor union circles over the country. A body is being instituted for him. The belief predominates that while delicious he jumped into the river.

## SHAW AT WHITE HOUSE.

Washington, April 20.—Former Secretary of the Treasury Shaw had a long talk with President Roosevelt today. Mr. Shaw declined to say what the talk was about, but said that it covered a wide range of subjects. It is known that the discussion covered questions of politics and finance. Mr. Shaw will return to New York tomorrow.

## TORPEDO BOAT SINKS.

Valetta, Island of Malta, April 20.—While maneuvering during a night attack outside the Grand Harbor late yesterday, the British torpedo boat destroyer Ariel, collided with the breakwater and sank. One man was drowned. The Ariel lies in deep water and it is expected that she will be a total loss.

## NOTICE TO SPORTSMEN

Our 1907 Catalogue will be the most complete edition ever issued. In fact, it is practically a "Hand Book" for lovers of the outdoor life. Send request for copy to

## ABERCROMBIE &amp; FITCH CO.,

Manufacturers of Complete Outfits for Explorers, Campers and Prospectors, Outing Garments, Fishing Tackle, Canoes, Guns and Ammunition.  
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That is just what you will say when you see the "Money Back" showing of Spring and Summer Shoes. Over 100 styles at \$3.50 not to be duplicated in style, finish or wearing quality under \$5.00 anywhere. At \$5.00 and up you get hand made, the finest selection of leather and individuality not to be had outside of this store. Davis Shoe Co.